UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,059	11/12/2003	Tsuyoshi Yamamoto	81784.0290	6351

26021 7590 07/10/2006

HOGAN & HARTSON L.L.P.
500 S. GRAND AVENUE
SUITE 1900
LOS ANGELES, CA 90071-2611

EXAMINER	
ALUNKAL, THOMAS D	

ART UNIT	PAPER NUMBER
2633	

DATE MAILED: 07/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/706,059	YAMAMOTO ET AL.	
	Examiner	Art Unit	
	Thomas D. Alunkal	2633	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/12/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-4 rejected under 35 U.S.C. 103(a) as being unpatentable over Akagi et al (**U.S. 6,434,096**) in view of Matsumoto (**U.S. 7,046,600**).

Regarding **Claims 1-2**, Akagi et al. teaches:

A tilt control method in an optical pickup including a tilt adjustment coil for adjusting the tilt of an objective lens, comprising the steps of:

- recording an offset adjustment signal in a test recording area provided on an optical disc (**see Column 12, lines 40-42**)
- wherein said offset adjustment signal is recorded while modifying a driving signal level supplied to said tilt adjustment coil (**see Column 12, lines 40-42**)
- thereafter playing back an RF signal of said offset adjustment signal that was recorded on the optical disc (**see Column 2, lines 42-44**)
- setting said driving signal level as an offset value for the driving signal to be supplied to the tilt adjustment coil from said offset adjustment signal that was played back (**see Figure 17, Elements 318, 320, 312, 313, and 314**)
- the tilt control is performed by adding the set offset value to a tilt signal for performing tilt control and supplying the added signal to said tilt adjustment coil (**see Figure 17, Elements 320, 312, 313, and 314**)

Akagi et al. does not teach:

- detecting a positive peak level (A1) and a negative peak level (A2) in the RF signal
- when a .beta. value obtained from .beta.=(A1+A2)/(A1-A2) reaches a maximum, said driving signal level is set

However, Matsumoto teaches:

- detecting a positive peak level (A1) and a negative peak level (A2) in the RF signal (**see Figure 5, Elements 22 and 24**)
- when a .beta. value obtained from .beta.=(A1+A2)/(A1-A2) reaches a maximum, said driving signal level is set (**see Column 11, lines1-4, Figure 5, Element 24, and Figure 3**). **Figure 3 shows a decrease in error value with maximum beta value**.

One of ordinary skill in the art at the time of the invention would have been motivated to combine the above teachings of Akagi et al. to the teachings of Matsumoto. Both Akagi et al. and Matsumoto teach the use of reproduced pick up information to control particular aspects of an optical disc apparatus. In Column 2, lines 58-76, Column 3, lines 13-16, and Column 4, lines 1-5 of Akagi et al., Akagi et al. describes problems which are due to imperfections in the optical pick apparatus that lead to poor recording quality. In Column 9, lines 13-19 of Matsumoto teaches that by maximizing the beta value, recording quality is optimally improved. Thus, one of ordinary skill in the art at the time of the invention would have found it prima facie obvious to combine the teachings of Akagi et al. and Matsumoto since Matsumoto teaches a proposed solution to the problems described by Akagi et al.

Regarding **Claims 3-4**, Akagi et al teaches:

A tilt control apparatus for adjusting the tilt of an objective lens in an optical pickup comprising:

- a signal recording circuit for recording a signal by irradiating light onto a disc via said objective lens (**see Figure 1, Element 4**)
- a photo detector circuit for obtaining an RF signal by detecting reflected light from the disc via said objective lens (**see Figure 1, Element 9**)
- a tilt control coil for controlling the tilt of said objective lens (**see Figure 17, Element 314**)
- a tilt control circuit for controlling the driving signal level supplied to said tilt adjustment coil (**see Figure 17, Element 312**)
- an offset adjustment signal is written to the disc by recording a signal to the disc by said signal recording circuit while said tilt control circuit modifies the driving signal level to the tilt control coil (**see Column 12, lines 40-42**)
- the relationship between driving signal level and recording position is stored (**see Column 12, lines 30-33 and Figure 17, Element 319**)
- said photo detector circuit detects an RF signal of the offset adjustment signal that was recorded on the disc (**see Column 12, lines 40-45 and Figure 1, Element 9**)
- the tilt control circuit uses the driving signal level for the tilt control coil (**see Figure 17, Elements 312, 313, and 314**)

- said tilt control circuit performs tilt control by adding said offset value to a tilt signal for performing tilt control and supplying this to said tilt adjustment coil (**see Figure 17, Elements 320, 312, 313, and 314**)

Akagi et al. does not teach:

- beta value detector circuit detects a .beta. value
- maximum value of said beta value detector is used

However, Matsumoto teaches:

- beta value detector circuit detects a .beta. value (**see Figure 5, Element 24**)
- maximum value of said beta value detector is used (**see Figure 3**) **Figure 3 shows a decrease in error value with maximum beta value**.

One of ordinary skill in the art at the time of the invention would have been motivated to combine the above teachings of Akagi et al. to the teachings of Matsumoto. Both Akagi et al. and Matsumoto teach the use of reproduced pick up information to control particular aspects of an optical disc apparatus. In Column 2, lines 58-76, Column 3, lines 13-16, and Column 4, lines 1-5 of Akagi et al., Akagi et al. describes problems which are due to imperfections in the optical pick apparatus that lead to poor recording quality. In Column 9, lines 13-19 of Matsumoto teaches that by maximizing the beta value, recording quality is optimally improved. Thus, one of ordinary skill in the art at the time of the invention would have found it prima facie obvious to combine the teachings of Akagi et al. and Matsumoto since Matsumoto teaches a proposed solution to the problems described by Akagi et al. Therefore, the invention as a whole is prima facie obvious to one of ordinary skill in the art at the time the invention was made, especially in the absence of evidence to the contrary.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Alunkal whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shanon Foley can be reached on (571)272-0898. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas Alunkal
Patent Examiner

Shanon Foley
Supervisory Patent Examiner